

Summary of 14 APR 2003 QADJ Model Runs

14-Apr-03

CASE 2: 100 kcfs at PRIEST RAPIDS in AP2, 220 kcfs at McNARY in MAY, Refill COULEE in JUN

Assumptions:

- * Streamflows were adjusted to the April Final Water Supply Forecast and shaped 59 different ways based on observed historical runoff.
- * Starting Elevations were the 15 April forecasted elevations from STP.
- * Grand Coulee operates to meet 100 kcfs 15 - 30 Apr at Priest Rapids, 220 kcfs at McNary in May, and targets El. 1288, 1285, 1280, and 1278 in June, July, Aug 15, and Aug 30.
- * Hungry Horse operates to VARQ, meets minimum flows at Columbia Falls, targets full in June, El. 3550 in July, El. 3545 Aug 15, and 3540 ft by 31 Aug.
- * Brownlee operates to flood control elevations.
- * Dworshak releases 15 kcfs in April, targets full in June, releases 13 kcfs in Jul - Aug for LWG and targets 1520 ft by 31 Aug.
- * Libby operates on min flow (4 kcfs) or VARQ flood control Mar - Apr, conducts a sturgeon pulse operation in May and Jun, targets El. 2454 in July with minimum bull trout flow of 7 kcfs, targets El. 2449, and 2439 on Aug 15 and Aug 30.

Results:

Priest Rapids Meets Flow Objectives of 100 kcfs Apr2 and 135 kcfs May - Jun:

Month	Target	No. Times Meeting Target out of 59 yrs	Average Flow for 59 Years (kcfs)
Apr2	100	59	110
May	135	58	156
Jun	135	56	155

Lower Granite Meets Flow Objectives of 89.1 kcfs in Apr - May, 76.2 kcfs in June and 50.5 kcfs in Jul - Aug:

Month	BiOp Target	No. Times Meeting Target out of 59 yrs	Average Flow for 59 Years (kcfs)
Apr2	89.1	11	74
May	89.1	32	90
Jun	76.2	36	82
Jul	50.5	6	41
Aug1	50.5	0	36
Aug2	50.5	0	28
APR1-JUN *	84.9	5	81

* For APR1 in all years: observed data for 1 - 13 April and short-term model results for 14 - 15 Apr were used. (This was done to compare results from last run for Apr 1 - Jun 30.)

Lower Granite meets threshold target for APR1-JUN (81.2 kcfs) in 35 of the 59 years.

McNary Meets Flow Objectives of 220 kcfs in Apr2 - Jun and 200 kcfs in Jul - Aug:

Month	BiOp Target	No. Times Meeting Target out of 59 yrs	Average Flow for 59 Years (kcfs)
Apr2	220	4	178
May	220	48	228
Jun	220	28	220
Jul	200	0	141
Aug1	200	0	140
Aug2	200	0	122

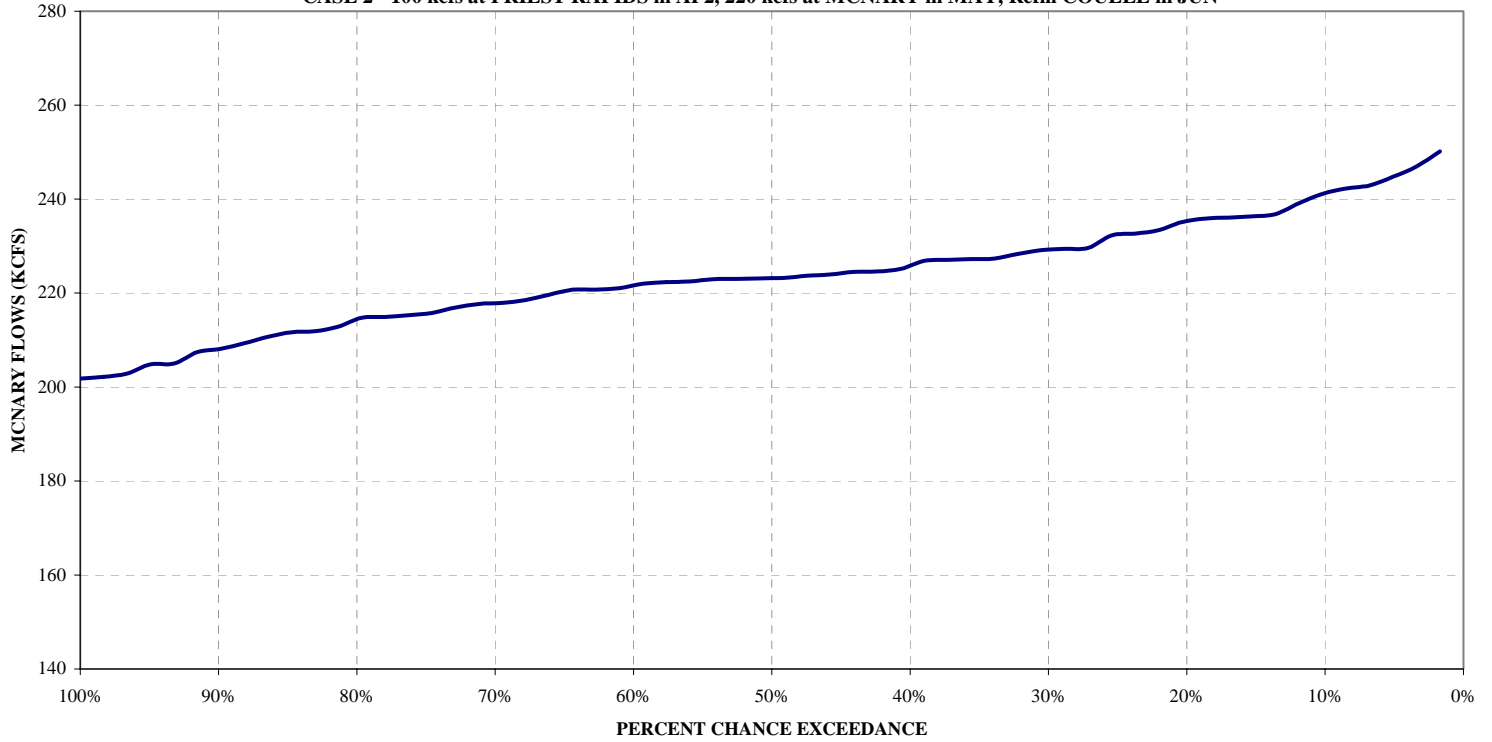
Projects Refill by June 30:

Month	No. Times Meeting Target out of 59 yrs	Average Elevation on 30 Jun for 59 Years	Full
Libby	10	2451.1	2459.0
Hungry Horse	59	3560.0	3560.0
Grand Coulee	59	1288.0	1288.0
Dworshak	59	1600.0	1600.0

Note: Grand Coulee operates to meet 100 kcfs at Priest Rapids in Apr2, 220 kcfs at McNary in May and refills to Elev 1288 in Jun.

**MCNARY OUTFLOW
MAY-JUNE AVERAGE**

CASE 2 - 100 kcfs at PRIEST RAPIDS in AP2, 220 kcfs at MCNARY in MAY, Refill COULEE in JUN



**LOWER GRANITE
APR-JUN OUTFLOW**

